

DAVYDOV, Mikhail Prokof'yevich; ZORI, Anatoliy Stafanovich; KOCHERGA,  
E., redaktor; VUYEK, M., tekhnicheskiy redaktor.

[Rapid sinking of vertical shafts] Skorostnaya prokhodka  
vertikal'nykh stvolov. Kiev, Gos.isd-vo tekhn. lit-ry UkrSSR,  
1955. 71 p.  
(Shaft sinking)

ZORI, A.S.

DAVYDOV, M.P.; ZORI, A.S.

202.1 meters of prepared mine shaft per month. Nukh. trud. rab.  
9 no. 5:21-24 Ky '55. (MLIA 8:7)

1. Nachal'nik kombinata Stalinskashkhtostroy (for Davydov). 2. Nachal'-  
nik tekhnicheskogo otdela tresta Stalinskashkhtoprokhodka (for Zori).  
(Shaft sinking)

DAVYDOV, M.P.; ZASLAVSKIY, Yu.Z.; ZORI, A.S.

150 meters of prepared mine shafts per month. Mekh. trud. rab. 8  
no.8:17-20 D '54. (MERA 8:1)

1. Upravlyayushchiy trestom Stalinskakhtoprokhodka (for Davyдов)
2. Glavnnyy inzhener prokhodcheskogo stroyupravleniya №.3 (for Zaslavskiy).
3. Nachal'nik tekhnicheskogo otdela tresta (for Zori)  
(Donets Basin--Mining engineering)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6

2001 A 6

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6"

DAVYDOV, M.P.; ZORI, A.S.

120.6 m of shaft sinking per month. Mekh.trud.rab. 8 no.3:6-9  
Ap-May '54. (MERA 7:6)

1. Upravlyayushchiy trestom Stalingshakhtoprokhodka (for Davyдов).
2. Nachal'nik tekhnicheskogo otdela tresta (for Zori).  
(Shaft sinking)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6

DAVYDOV, M.P.; ZORI, A.S.; VOLOBUYEV, S.Kh.

Sinking of 120.6 meter of completed shaft of a large diameter in a month. Ugol' 29 no.6:31-37 Je '54. (KLEA 7:6)

1. Trest Stalinshakhtoprokhodka. (Shaft sinking)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6"

ZORI, A.S.

Exemplary shaft sinking in the Butovskaia-Glubokaiia mine.  
Gor. zhur. no.7:40-45 J1 '56. (MLRA 9:9)

1. Nachal'nik tekhnicheskogo otdela tresta Stalinshakhtopromkhodka.  
(Donets Basin--Shaft sinking)

1. ZORI, A. S.
2. USSR 600
4. Shaft Sinking
7. Sinking the skip shaft of the "Vetka-Glubokaia" mine, Ugol', 26, No. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZORI, A. S.

PA 7/49T84

USSR/Mining Machinery Mining Methods	Jul 84
<p>"Performance of the S-153 Coal Loader in a Rock Mine," A. S. Zori, Engr, Stalinshakhtovosstanovleniye Trust, 1 p</p>	
<p>"Ugol'" No 7 (268)</p>	
<p>Rock removal is one of the most laborious and least mechanized of mining operations. Zori describes how a coal-loading machine was used for this purpose. Concludes that machine S-153 can be recommended for drifts passing through coal and argillite, both for loading coal and small, well-broken rocks. (Editor warns that machine should be used for soft rocks only.)</p>	
FID 7/49T84	

ANDROS, I.P., inzh.; ASSONOV, V.A., kand. tekhn. nauk.; BERNSTEYN, S.A., inzh.; BOKIY, B.V., prof.; BROVMAN, Ya.V., inzh. BOGDARENKO, A.P., inzh.; BUCHHEV, V.K., kand. tekhn. nauk; VIKHRENIKOV, G.P., kand. tekhn. nauk; VOLKOV, A.F., inzh.; GLIMSKIJ, M.M., kand. tekhn. nauk; GORODNICHENOV, V.M., inzh.; DEMENT'YEV, A.Ya., inzh.; DONUCHAYEV, M.M., inzh.; DUBNOV, L.V., kand. tekhn. nauk; EPIFANTSEV, Yu.N., kand. nauk; ZIL'BERBROD, A.F., inzh.; ZHEDANOV, S.A., kand. tekhn., inzh.; KAPLAN, L.B., inzh.; ZINCHENKO, B.M., inzh.; ZORI, A.S., inzh.; KRAVTSOV, Ye.P., inzh.; KATSUROV, I.N., dots.; KIMATSKIY, N.V., L.M., kand. tekhn. nauk; KRIVOROG, S.A., inzh.; KRINITSKIY, kand. tekhn. nauk; LITVIN, A.Z., inzh.; MALEVICH, N.A., A.L., inzh.; MINDELI, B.O., kand. tekhn. nauk; MAZAROV, P.P., kand. tekhn. nauk; NASONOV, I.D., kand. tekhn. nauk; NYVYENBURG, V.Ye., kand. tekhn. nauk; POKROVSKIY, G.I., prof., doktor tekhn. nauk; PROLAEV, E.T., kand. tekhn. nauk; ROZENBAUM, inzh.; ROSSI, B.D., O.B., inzh.; SUKRUT, A.A., inzh.; SUKHANOV, A.P., prof., doktor tekhn. nauk; TARANOV, P.Ya., kand. tekhn. nauk; TOKAROVSKIY, D.I., inzh.; TRUPAK, N.G., prof., doktor tekhn. nauk; VEDOROV, S.A., prof., doktor tekhn. nauk; FEDYUKIN, V.A., inzh.; KHOKHLOVKIN, D.M., inzh.; KHRABROV, N.I., kand. tekhn. nauk; CHEKAREV, V.A., inzh.; CHERNAVSKIN, N.N., inzh.; SHREYBER, B.P., kand. tekhn. nauk; IIROV, B.A., kand. tekhn. nauk; YAKUSHIN, N.P., kand. tekhn. nauk; YANCHUR, A.M., inzh.; YAKHONTOV, A.D., inzh.; POKROVSKIY, N.M., otvetstvennyy red.; KAPIUN, Ya.G. [deceased], red.; MONIN, G.I., red.; SAVITSKIY, V.T.

(Continued on next card)

ANDROS, I.P.----(continued) Cari 2.

red.; SANOVICH, P.O., red.; VOLOVICH, M.Z., inzh., red.; GORITSKIY,  
A.V., inzh., red.; POLUTANOV, V.H., inzh., red.; NADEJKOV, E.I.,  
inzh., red.; CHECHKOV, L.V., red. izd-va; PROZOROVSKAYA, V.L.,  
tekhn. red.; NADEINSKAYA, A.A., tekhn. red.

[Mining; an encyclopedic handbook] Gorneye deli; entsiklopedicheskiy  
spravochnik. Glav. red. A.M. Terpilovskiy. Moskva, Gost. nauchno-  
tekhnicheskoye izd-vo lit-ry po ugol'noi promstv. Vol. 4 [Mining  
and timbering] Provedenie i kraslenie gornykh vyrabotok. Red-  
kollegiya tom: N.M. Pekrovskiy... 1958. 464 p. (MZhKh 11:7)

(Mining timbering) (Mining engineering)

TYURKIAN, Raffi Armenakovich; GORLOV, Petr Ivanovich; ZORI, Anatoliy Stefanovich; AFONCHENKO, Vladimir Vasil'yevich; KUITSUHOV, V.I., otv. red.; CHECHKOV, L.V., red. izd-va; LOMILINA, L.N., tekhn. red.; IL'INSKAYA, G.M., tekhn. red.

[Information for worker on vertical shafts, shaft bottoms, and chambers] Pamiatka prokhodchika vertikal'nykh stvolov, okolostvol'nykh dvorov i kamer. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1960. 71 p.  
(Shaft sinking)

ZORI, A.S., gornyj inzh.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065420015-6"

Obsolete book ("Rapid shaft sinking" by A.N.Alymov. Reviewed by A.Z.Zori). Ugol' Ukr. 3 no.9:46 S '59. (MIRA 13:2)  
(Shaft sinking) (Alymov, A.N.)

ZORIC, Anica, dipl. ec.

Amortization under the conditions of the economic growth of electric industries. Elektroprivreda 15 no.1:20-28 Ja '62.

1. Zajednica elektroprivrednih preduzaca Hrvatske, Zagreb.

ZORIC, Anica, dipl. ek.

Influence of the financial potential of amortization on selecting  
the structure of electric power sources. Elektroprivreda 17  
no. 4/52232-233 Ap-Hr '64

ZORIC, B.

Depreciation and conjugation effects of silver ions on the water and water-solvent mixture. B. Madićević and  
A. Zorić, *Zagreb, Jugoslavia*. *Radovi Z. Društva*, 1965, 10, 103-110.  
The optical properties obtained by adding AgNO<sub>3</sub> to  
water at various concentrations of H<sub>2</sub>O and in 90%  $\text{H}_2\text{O}-\text{D}_2\text{O}$  mixtures were investigated. The ionization was studied, and from the ionization curve, the changes in turbidity were followed with time. The absorption intensity at a certain time after mixing in  
the system of one rate component while the other is kept constant. No relation was found between the variation of the absorption coefficient and the variation of the  
absorption coefficient. The spin picture predominantly depends on the spin of all the diode points, and the absorption is observed. For the characterization of the ratio of electron conjugation to stable systems was used. This method provides distinction between systems that are stable because of the presence of complete ions and those that are stable because of the formation of strong permanent pairing,  
b. ultrachromism

ZORIC, L.

Shale in the Aleksinac deposits. p. 513.  
TEHNIKA, Beograd, Vol. 10, no. 4, 1955.

SO: Monthly List of East European Accessions, (EEL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

ZORIC, M

"Jackdaw As Our Town Bird", p. 440, (NAUKA I PRIRODA) ( Vol. 6, No. 10 1953,  
Beograd, Yugoslavia)

SO: Monthly List of East European Accession L.C. Vol.3, No. 4, April 1954

ZURIC, Tine, dipl. inz. (Maribor, Papinova 2,

adres for modern industries. Automatika 5 no.1.17-18 64.

ZORIC, Zoran

A criterion for the optimal geometry of the reactor fuel element. Bul Inst Nucl 11:93-103 '61.

1. Institute of Nuclear Sciences "Boris Kidrich," Department of Reactor Engineering, Vinca.

SARIC,Marko,dr.; KOSOKOVIC,Smiljka,dr.; ZORICA,Mladen,dr.; BERIC,Tihomil,dr.

Occupational lead poisoning in workers employed in the construction  
of the "Liberty Bridge". Lijec. vjes. 81 no.11:803-809 '59.

1. Iz Instituta za medicinska istrazivanja JAZU i Interne klinike  
Medicinskog fakulteta Sveucilista u Zagrebu.  
(LEAD POISONING)

ZORICA, M.; SARIC, M.

Asbestosis in asbestos-cement workers. Arh. hig. rada 12 no.2:  
97-118 '61.

1. Zavod za zastitu zdravlja, Split i Institut za medicinska  
istraživanja i medicinu rada, Zagreb.  
(ABESTOSIS statist)

ZORICH, A.S., inzh.

Bearing capacity of reinforced concrete and prestressed  
elements subjected to cross-bending. Sbor. trud. IZKHMI  
no. 3:64-75 '59. (MIRA 13:7)  
(Girders) (Strains and stresses)

ZORICH, A.S., inzh.

Determining stresses in reinforced concrete elements during their compression by prestressed oblique or curvilinear reinforcement. Stroi.konstr. no.2124-44 '65.

(MIRA 18:12)

1. Khar'kovskiy PromstroyNIIproyekt.

KALENICHENKO, A.G.; ZORICH, A.S.

Effect of using furnace-slag compositions instead of plain  
concretes in making certain reinforced concrete construction  
elements. Sbor.turd.IUZHNI no.3:161-199 '59.  
(MIRA 13:?)  
(Reinforced concrete) (Slag)

ZORICH, A.S., inzh.; KARABAN, N.N., inzh.

Stand for testing steel construction elements, Sbor. trud.  
IUZHNI no. 3:313-320 '59. (MIREA 13:7)  
(Steel, Structural--Testing)

SOLODKIY, A.I., inzh.; ZORICH, K.S., inzh.

Automation and mechanization of technical-control processes in machinery plants. Mashinostroenie no.1:76-77 Ja.-F '62. (MIRA 15:2)

1. Proyektno-konstruktorskiy tekhnologicheskiy institut Kiyevskogo sovnarkhoza.

(Automation)  
(Quality control)

VARFOLOMEYEVA, Ye.K.; BOTOVA, A.S.; SHEFLER, V.F.; ZORICH, N.F.

Chemistry evening on the topic "Metals and alloys." Khim. v shkole  
17 no. 2:64-70 Mr-Ap '62. (MIRA 15:3)

1. Pedagogicheskiy institut, g. Ul'yanovsk.  
(Chemistry--Study and teaching)(Metals)

БЕГІМОВ, О.Р.; КРАВЧЕНКО, Л.І.; АЛІМІТ, І.А.

Preparation of trivalent cerium chloride crystal hydrate.  
Ukr. Khim. zhur. 30 no.10(169)-170 (1964).

(ХІМ. 17:1)

I. Institut osnovay i neorganicheskoy khimii AU Nauk.

ZORICH, S. D. Cand. Biolog. Sci.

Dissertation: "The Fundamental Problems of Hygiene and Safety in the Manufacture of Trinitrotoluene." First Moscow Order of Lenin Medical Inst, 17 Mar 47.

SO: Vechernaya Moskva, Mar, 1947 (Project #17836)

ZORICH, V.

Boundary properties of a class of mappings in a space.  
Dokl. AN SSSR 153 no.1:23-26 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.  
Predstavлено академиком P.S. Aleksandrovym.

ZORICH, V.A.

Correspondence of boundaries in  $Q$ -quasi-conformal mappings of  
a sphere. Dokl. AN SSSR 145 no.6:1209-1212 Ag 162. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
Predstavлено академиком P.S.Aleksandrovym.  
(Conformal mapping)

ZORICH, V.

Determination of boundary elements by means of cross sections.  
Dokl. AN SSSR 164 no.4:736-739 O '65.

(MIRA 18:10)

1. Moskovskiy gosudarstvenny universitet, Submitted March 1, 1965.

ZORICH, V.A.

Correspondence of boundaries for Q-quasi-conformal mappings of  
a sphere. Dokl.AN SSSR 145 no.1:31-34 Jl. '62. (MIRA 15:7)

1. Moskovskiy gosudarstvennyy universitat imeni Lomonosova.  
Predstavлено академиком M.A.Lavrent'yevym.  
(Conformal mappings)

AL'FORS, LARS [Ahlfors, Lars], prof.; LIPMAN, Boris [prof.]; ZORICH, V.A.  
[translator]; KIRILLOV, A.A. [translator]; SHABAT, B.V., red.;  
PLUZHNIKOVA, N.I., red.; PRIDANTSEVA, S.V., tekhn., red.

[Space of Riemann surfaces and quasi-conformal mappings] Pro-  
stranstva rimanovykh poverkhnostej i kvazikonformnye otobra-  
zheniya. Pod red. B.V. Shebata. Moskva, Izd-vo inostr.lit-ry,  
1961. 176 p.  
(Riemann surface) (Conformal mapping)

(NIRA 15:1)

L-21685-66

ACC NR AP601524

SOURCE CODE: 101/0096/65/000/011/6019/0021

AUTHOR: Borichev, V. A. (Engineer); Pavlov, N. V. (Engineer); Palyagin, V. V. (Engineer)

RE: Thermal power station (Barnaul, stage capacity 50000)

TITLE: Use of the NII-klare parallel flow combustion devices in SKZ boilers

SOURCE: Elektroenergetika, nov. 12, 1965, 1-21

TOPIC: Surface combustion, fine coal combustion, steam boiler (NII-klare), steam boiler, SKZ

ABSTRACT: The basic barriers for the combustion of fine peat and lignite in oil-fired power plants are associated with difficulties of ignition and combustion. These barriers are not very difficult to overcome, according to V. P. Borichev, N. V. Pavlov, and V. V. Palyagin, Elektroenergetika (Heat Power Engineering), No. 1, 1965. Consequently, the department of steam generator design of the NII carried out numerous investigations of the problem, resulting in the construction of a new combustion device using the system in which the fuel burns in plane parallel flows bringing the air-fuel mixture into the flame at a speed of 10 m/sec. From 1966 to 1968, experiments were carried out at the NII and the Institute of Thermal Power Plants of the USSR, and the first test was made in the 100 t/h EP-1400 boiler. The results of these tests were published in the journal Elektroenergetika, No. 12, 1968. The new combustion devices, among 472 examples certified by the Soviet

21.

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L 24685.66  
ACC NM: AP6015524

gation were also A. V. Patrikeyev, R. A. Molchanov, Z. V. Matveyeva, I. A. Shindel', and I. Ye. Grigor'yev. Extensive tests, described briefly in the article, show that the new method is by far the most economical for the combustion of low-calorific fuels. The new method does away with the need for auxiliary fuel for secondary air at the back wall of the furnace. In the experiments, the new method was compared to the standard because the latter is the most widespread. The results clearly show that the new device is more economical. The author's name is not mentioned in the article.

Card 2/2

KUZ'MIN, N.V., kandidat tekhnicheskikh nauk; ZORICHEN, V.D.

Letter to the editor. Teploenergetika 3 no.12:58-59 D '56.  
(MIMA 9:12)

1. Nachal'nik otstola maloy energetiki TSentral'nogo kotloturbino-  
nogo instituta (for Kuz'min). 2. Glavnnyy inzhener Biyskogo kotel'-  
nogo zavoda (for Zorichev).  
(Boilers)

ZORICHEN YO. S.

В. Н. Курин

Широко гипотетичные методы определения частоты.  
Беседа

В. А. Гарин

О методах измерения в различных типах гидролитика и в частотной гидроакустике

10 часов  
(с 18 до 22 часов)

Г. Н. Чистов

Полуавтоматические рефракторы в автоматизированной измерительных системах в лаборатории физико-химических методов

Г. И. Киселевский

К теории устойчивости аттестаций.

М. Е. Гришанин

М. Е. Кондрат

Физическое сопоставление в автоматизированной измерительной установке

В. Р. Денин

О способах изображения в звуковой магнитофоне в спектральном диапазоне

15

Г. М. Балашовский

О группировании призматического звука в изотермический генераторный метод

11 часов

(с 10 до 10 часов)

А. М. Волковский

Новые методы определения излучения в изотермическом генераторе

М. С. Жебровский

Ю. А. Островский

Многоканальное упомянутые частоты

В. В. Зарин

Об новых способах измерения спектральных и спектральных излучений

В. А. Чистов

О предварительном проектировании в промышленности

11 часов

(с 18 до 22 часов)

47

report submitted for the Centennial Meeting of the Scientific-Technological Society of  
Radio Engineering and Electrical Communications Inc. A. S. Popov (VKRIS), Moscow,  
8-12 June, 1959

SIDORENKO, A.V., glav. red.; ZORICHEVA, A.I., red.; VOLKOV, S.N.,  
soredaktor; SOLOMATINA, Z.D., red. izd-va; VLASOV, I.S.,  
red.izd-va; GUROVA, O.A., tekhn. red.

[Geology of the U.S.S.R.] Geologija SSSR. Glav.red.A.V.  
Sidorenko. Moskva, Gosgeoltekhnizdat. Vol.2. [Archangel  
and Vologda Provinces and the Komi A.S.S.R.] Arkhangel'-  
skaia, Vologodskia oblasti i Komi ASSR. Pt.1.[Geological  
description] Geologicheskoe opisanie. Red. A.I.Zoricheva.  
1963. 1077 p.

(MIRA 16:12)

(Archangel Province--Geology)  
(Vologda Province--Geology)  
(Komi A.S.S.R.--Geology)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6

ZORICHEVA, A.I.

Stratigraphy of Paleozoic deposits in the northern Russian Platform. Mat. VSEGEI no. 14:153-168 '56. (MIRA 10:1)  
(Russian Platform--Geology, Stratigraphic)

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CIA-RDP86-00513R002065420015-6"

BOCH, S.G.; GRUSHEVOY, V.G.; DZEVANOVSKIY, Yu.K.; ZORICHINA, A.I., IVANOV,  
A.A.; KUREK, N.N.; LIHROVICH, L.S.; MOROZENKO, N.K.; MUKHOROSHENY,  
V.P.; RUSANOV, B.S.; SPIZHARSKIY, T.N.; SHABAROV, N.V.; SHATALOV,  
Ye.T., redaktor; DZEVANOVSKIY, Yu.K.; redaktor; KRASNIKOV, V.I...  
redaktor; MIRLIN, G.A., redaktor; RUSANOV, B.S., redaktor; SEMENNO-  
VA, M.V., redaktor; GUROVA, O.A., tekhnicheskiy redaktor.

[Instruction for compiling and preparing for publication the state  
geological map of the U.S.S.R., and the map of the mineral resources  
of the U.S.S.R. Scale 1:1000000] Instruktsiya po sestavleniiu i pod-  
gotovke k izdaniyu gosudarstvennoi geologicheskoi karty SSSR i karty  
poleznykh iskopaemykh SSSR. Masshtab 1:1000000. Moskva, Gos. nauchno-  
tekhn. izd-vo lit-ry po geologii i okhrane nedor. 1955. 52 p., tables  
of symbols, maps [Microfilm] (MLIA 9:6)  
1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedor.  
(Geology--Maps)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6

NEKRASOVA, O.I.; OVCHINNIKOVA, S.V., redaktor; ZORICHENVA, A.I., redaktor;  
GORDIYENKO, Ye.B., tekhnicheskiy redaktor.

Lithology of lower and middle Cambrian deposits in the profile of  
the Amga base well (Eastern Siberia). Trudy VSEGEI 4:3-68 '55.  
(MLRA 9:1)  
(Amga Valley--Geology, Stratigraphic)

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CIA-RDP86-00513R002065420015-6"

LEYKINA, Ye.S.; LUKASHENKO, N.P.; ZORIKHINA, V.I.; IAVHENOV, B.K.; MANGDOV, M.M.

Natural foci of *Echinococcus multilocularis* in Novosibirsk Province. Med.paraz. i paraz.bol. 28 no.2:206-213 Mr-Ap '59.

(MIRA 12:6)

1. Iz sektora eksperimental'noy parazitologii Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir.instituta - prof.P.G.Sergiyev, zav.sektorom - prof.V.P.Pod'yapol'skaya) i gospital'noy khirurgicheskoy kliniki Novosibirskogo meditsinskogo instituta (zav.klinikoy I.L.Bregadze).

(ECHINOCOCCOSIS

multilocularis, natural foci in Novosibirsk region, USSR (Rus))

GEFTER, V.A.; ZORIKHINA, V.I.

Epidemiological investigations of ascariasis using immunological  
and other methods. Med.paraz. i paraz.bol. 28 no.4:394-400 Jl-Ag  
'59. (MIRA 12:12)

1. Iz sektora eksperimental'noy parazitologii Instituta malyarii,  
meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookh-  
raneniya SSSR (dir. instituta - prof. V.P. Pod'yapol'skaya) i sani-  
tarно-epidemiologicheskoy stantsii Moskovsko-Okruzhnay zheleznoy  
dorogi (nachal'nik stantsii I.I. Mogilevskiy).  
(ASCARIASIS epidemiology)

ZORIKHINA, V.I. (Moskva)

Use of the intracutaneous allergic reaction in diagnosing  
echinococcosis. Fel'd.i akush. 27 no.7:21-23 Jl '62. (MIRA 15:9)  
(ALLERGY) (TAPEWORMS)

LEYKINA, Ye.S.; ZORIKHINA, V.I.

Simplified method for an immunological diagnosis of helminthiases.  
Report no.2: Use of the agglutination reaction with carmine for the  
early diagnosis of ascariasis among children, Med.paraz. i paraz.  
bol. 25 no.3:245-248 J1-S '56. (MLRA 9:10)

1. Iz Instituta malyarii, meditsinskoy parazitologii i gel'mintologii  
Ministerstva zdravookhraneniya SSSR (dir. inst. - prof. P.G.Sergiyev,  
zav. sektron - prof. V.P.Pod'yapol'skaya)  
- (ASCARIASIS, diagnosis,  
agglut. with carmine technic (Rus))  
(AGGLUTINATION,  
carmine agglut. in ascariasis diag. (Rus))

ZORIKHINA, V.I.

Study on the immunodiagnosis of echinococcosis. Report No.2:  
New serological reactions in the diagnosis of echinococcosis and  
comparative evaluation of immunological diagnostic methods. Med.  
paraz.i paraz.bol. no.58:544-551 '61. (MIRA 14:10)

1. Iz otdela gel'mintologii Instituta meditsinskoy parazitologii  
i tropicheskoy meditsiny imeni Ye.I. Martsevovskogo Ministerstva  
zdravookhraneniya SSSR (dir. instituta - prof. P.G. Bergiyev,  
zav. otdelom - prof. V.P. Pod'yapol'skaya) i kafedry gospital'noy  
khirurgii Novosibirskogo meditsinskogo instituta (nav. kafedroy -  
prof. I.L. Eregadze).  
(HYDATIDS) (SERUM DIAGNOSIS)

USSR/Zooparasitology - Parasitic Worms. General Problems.

G.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 48181

Author : Leykina, E.S., Gefter, V.A., Zorikhina, V.I.

Inst : -  
Title : The Application of the Agglutination Reaction with Carmine  
for the Early Diagnosis of Ascariasis in a Massive Examina-  
tion of the Population.

Orig Pub : Med. parazitol. i parazitarn. bolezni, 1957, 26. No 5, 612-  
617.

Abstract : With the aid of the agglutination reaction with carmine  
(AR) and the reaction of microprecipitation (RM), 204 men  
were examined immunologically. AR proved to be less sen-  
sitive than RM, but, due to the high percentage of positi-  
ve results (77.2) and the simplicity of the method, it is  
possible to recommend the practical application of the  
first reaction.

Card 1/1

- 9 -

ZORIKHINA, V.I.

Latex agglutination reaction in the diagnosis of echinococcosis  
and alveococcosis. Med. paraz. i paraz. bol. 33 no.1:93-96  
(MIRA 18:1)  
Ja-F '64

1. Eksperimental'noye ottdeleniye gel'mintologicheskogo otdela  
Instituta meditsinskoy parazitologii i tricheskoj meditsiny  
(direktor - prof. P.G. Sergiyev) Ministerstva zdravookhraneniya  
SSSR, Moskva.

LUKASHENKO, N.P.; ZORIKHINA, V.I.

Epidemiology of alveolar echinococcosis in the central zone of  
the Baraba Forest Steppe, Novosibirsk Province. Med.paraz. i  
paraz.bol. 30 no.2:159-168 Mr-Apr '61. (MIRA 14:4)

1. Iz gel'minotologicheskogo otdela Instituta meditsinskoy para-  
zitologii i tropicheskoy meditsiny imeni Ye.L. Martsonovskogo  
Ministerstva zdravookhraneniya SSSR (dir. instituta - prof.  
P.G. Sergiyev, zav. otdelom - prof. V.P. Pod'yapol'skaya).  
(NOVOSIBIRSK PROVINCE—HYDATIDS)

REF ID: A6542

AUTHOR: Zorikov, A.P., Technician SOV/91-58-3-18/28

TITLE: The Mounting of RT-10 Dischargers on 15 kv Power Lines (Ustanovka razryadnikov tipa RT-10 na liniyakh 15 kv) Exchange of Experience (Obmen opytom)

PERIODICAL: Energetik, 1958, Nr 3, pp 24-25 (USSR)

ABSTRACT: There are many 15 kv power lines in the Kaliningrad Oblast', but the area is short of electric equipment, in particular of lightning-protection installations along the lines and at sub-stations. Therefore a tube discharger called RT 10 was constructed in a laboratory (Fall of 1955) and tested successfully in practice (Summer of 1956). The author complains that Soviet industry no longer produces such RTC tube dischargers for 6, 10 and 15 kv power lines. There is 1 table.

Card 1/1

ZORIKOV, A.P.

ZORIKOV, A.P., teknik.

~~Installing RT-16 lightning arresters on 15 kv lines. Energetik 6 no.3:~~  
24-25 Mr '58.  
(Lightning protection)

ACCESSION NR: AP4041872

S/0170/64/000/007/0057/0061

AUTHOR: Bergel'son, B. R.; Zorikoyev, G. A.

TITLE: Vigner's energy and safe operating conditions for reactor graphite

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 7, 1964, 57-61

TOPIC TAGS: Vigner energy, reactor graphite, nuclear reactor

ABSTRACT: A method is suggested for determining a quantitative relationship between the safe operating temperature range for reactor graphite and the integrated neutron flux, taking into account neutron energy spectrum. The designers of graphite-moderated (or reflector) reactors can determine the safe range using the curve and the formulas given in the article. The safe operating temperature of graphite is determined from the standpoint of the internal energy accumulation in graphite under irradiation. Orig. art. has 2 figures and 11 formulas.

Card 1/2

BURG 1984, R.R.; GOR'KOV, L.P.

higher energy and temperature of reaction graphite. Russ. fiz. zhurn.  
no. 7(87-61) Jl. 162.

V (MJ84 17.15)

1. Institut teoreticheskoy i eksperimental'noy fiziki, Moskva.

"APPROVED FOR RELEASE: 03/15/2001

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CIA-RDP86-00513R002065420015-6

BUDILOV, A., pervyy pomoshchnik kapitana; STALGIS, kapitan;  
ZORIN, pervyy pomoshchnik kapitana

Merchant seamen report to the party congress. Mor. flot  
21 no.10:7,12,19,22,29,35,39,43 0 '61. (MIRA 14:9)  
(Shipping)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6"

ZORIN, A.

Drawing up documents on the salvage of foreign ships. Mar. 24  
no. 12:22-23 D 114. (MIRA 18:8)

1. Starshiy yuriakhon'st Chernomorskogo perelodatya.

KUTUSHEV, F.Kh. (Leningrad K-156, prospekt Engel'sa, d.28, kv.150);  
ZORIN, A.B.

Analysis of phonocardiographic data in patent ductus arteriosus.  
Grud. khir. 6 no.2:67-71 Mr.-Ap '64.  
(HIRA 18:4)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey No.1  
(nachal'nik - deyatel'nyy chlen AMN SSSR prof. P.A.Kupriyanov  
[deceased]) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova,  
Leningrad.

ZORIN, A.B., (Leningrad, ul. Mayakovskogo, d.11, kv.52); SILIN, V.A.

Clinical significance of phonocardiography. Vest.khir.90.  
no.2:45-52 F'63. (MIRA 16:7)

1. Iz 1-y khirurgicheskoy kliniki usovershenstvovaniya vrachey  
(nachal'nik - prof. P.A. Kupriyanov) Voyenno-medistinskoy or-  
dena Lenina akademii imeni Kirova.  
(HEART-SOUNDS)

KUPRIYANOV, P.A. (Leningrad, D-123, ul. Ryleyeva, d.15.kv.6); KOLESOV, A.P.;  
KUTUSHEV, F. Kh.; BALLYUZEK, F.V.; SKORIK, V.I.; BURMISTROV, M.I.;  
LIBOV, A.S.; ZORIN, A.B.

Practice in using artificial blood circulation in surgery on  
the open heart. Grud.khir. 5 no.1:8-18 Ja-F'63. (MIRA 16:7)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey no.1  
(nachal'nik - deystvitel'nyy chlen AMN SSSR prof. P.A. Kupriyanov)  
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.  
(HEART-SURGERY) (BLOOD CIRCULATION, ARTIFICIAL)

KUTUSHEV, F. Kh, (Leningrad, K-156, pr. Engel'sa, d.28, kkv.150); KOLINSOV,  
Ye.V.; UVAROV, B.S.; ZORIN, A.B.; SILIN, V.A.

Angiocardiography in cardioplegia and control of the cardiac  
rhythm. Vest. khir. 91 no.8:17-26 Ag'63 (MIRA 17:3)

1. Iz 1-y khirurgicheskoy kliniki usovershenstvovaniya vrachey  
i kafedry anesteziologii (nachal'nik - prof. P.A. Kupriyanov  
[deceased]) Voyenno-meditsinskoy ordena Lenina akademii imeni  
Kirova.

ZORIN, A.B.; PISAREV, Yu.F.

Successful radical surgery in interventricular and interatrial septal defects. Kaz. med. zhur. no.2:69-70 Mr..Ap'63

(MIRA. 16:11)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya врачей No.1 (nachal'nik - deystvitel'nyy chlen AMN SSSR, prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova.

BUREMISTROV, M. I.; ZORIN, A. B.; KOBLENTS-MISHKE, A. I.

Electrocardiography and phonocardiography in the diagnosis of  
defects of the interatrial septum. Grud. khir. 4 no.1:24-29  
Ja-F '62. (MIR. 15:2)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey  
No. 1 (nach - prof. P. A. Kupriyanov) i kliniki premedevtiki  
vnutrennikh bolezney (nach. - prof. N. N. Savitskiy) Voyenno-  
meditsinskoy ordena Lenina akademii imeni S. M. Kirova. Adres  
avtorov: Leningrad K-9, prosp. Karla Marksa, d. 5/20, Klinika  
dlya usovershenstvovaniya vrachey.

(MITRAL VALVE—SURGERY) (BLOOD, GASES IN)  
(PNEUMOTHORAX)

KUPIYANOV, P.A.; KUTUSHEV, F.Kh.; ZORIN, A.B.

Surgical treatment of the tetralogy of Fallot. Pediatrilia 1  
no.5:56-57 My '62. (MIRA 15:5)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey  
No.1 Voyenno-meditsinskoy akademii imeni S.M. Kirova (nachal'-  
nik - prof. P.A. Kupriyanov).

(TETRALOGY OF FALLOT)

ZORIN, A. B.; MIKUTENOK, M. A.

Possibility of re-transfusion of the blood during surgical operations. Probl. gemat. i perel. krovi no.1:19-23 '62.  
(MIEA 15:7)

1. Iz kliniki khirurgii dlya usovershenstvovaniya vrachey No. 1  
(nach. - deystvitel'nyy chlen AMN SSSR prof. P. A. Kupriyanov)  
Voyennoc-meditsinskoy ordena Lenina akademii imeni S. M. Kirova.

(BLOOD--TRANSFUSION) (SURGERY, OPERATIVE)

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CIA-RDP86-00513R002065420015-6

KUTUSHEV, F.Kh.(Leningrad, K-156, prosp. Engel'sa, d.28,kv.150); SHANIN,Yu.N.;  
ZORIN, A.B.

Removal of foreign bodies from the respiratory tract. Grud.khir.  
no.4:104-106 J1-Ag '62. (MIRA 15:10)  
(RESPIRATORY ORGANS--FOREIGN BODIES)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6"

ZORIN, N.A.

Development of inland waterways to be carried out during 1959.  
Rech.transp. 18 no.1:31-34 Ja '59.  
(NKRA 12:2)

1. Nachal'nik Glavvodputi.  
(Waterways)

FISHZON-RYSS, Yu.I.; KAYEVITSER, I.M.; ZORIN, N.A.

Mechanism of the formation of paroxysmal tachycardia and a form of cardiac fibrillation resembling an attack. Trudy MONIKI no.5:237-242 '62. (MIRA 16:4)

1. Iz II terapevticheskoy kliniki Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirovskogo (zav. - doktor med.nauk L.P.Pressman) i Klinicheskoy bol'niцы (glavnnyy vrach - B.V.Smirnov).

(ARRHYTHMIA)

ZORIN, N. A.

ZORIN, N. A. "The productivity of labor on itinerary work and measures for its improvement." In the symposium: Materialy tekhn. soveshchaniy po putevym rabotam (M-vo rech. flota SSSR), Moscow, 1949, p. 157-175

SO: U-5240, 17Dec53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

ZORIN, N. I.

Dubnikov, L. M. and Zorin, N. I. - "The Preparation of Sulphur Monofluoride and its Properties." (p. 191)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1947, Vol. 17, No. 3.

MIKERIN, B.P.; ZORIN, N.I.

Reservoir pressure restoration in the Kutais field. Neft.khoz.  
36 no.2:63-65 F '58. (MIRA 12:4)  
(Kutais region--Secondary recovery of oil)

ZORIN, N. I.

USSR/Chemistry - Sulfur Compounds  
Chemistry - Sulfur monofluoride

Feb 1947

"The Preparation of Sulfur Monofluoride and Its Properties," L. N. Dubnikov,  
N. I. Zorin, 7 pp

"Zhur Obshch Khim" Vol XVII, No 2

Optimum reaction temperature, gas composition and notes on reaction vessel material.  
It was found impossible to obtain  $S_2F_2$  in a pure form after the reaction  $2AgF$   
 $3S = S_2F_2$  since  $S_2F_2$  is subject to dissociation in the reaction conditions.

PA 15T30

CONFIDENTIAL  
EX-13 AND EX-14 INFORMATION

**Preparation and properties of sulfur monofluoride.** I  
 M. Dubnikov and M. I. Zagorets, *Zhur. Org. Khim.* (USSR),  
 17, 185-92 (1981) (in Russian).—(1) The reaction  $AgF + S = SF_3 + AgS$ , carried out with approx. 30% excess  $S$ , begins at about 110–20°. The yield in gas is about 63–67% at 140–400° and falls to 18.9 and 10.0% at 550° and 600°, resp., its av. mol. wt. is highest (90.92, as against theor. 102.12 for  $SF_3$ ) when the reaction takes place at 140°; it falls to 81.92, 80.9, and 77.0 at 230, 400, 500, and 600°, thus indicating increasing decomposition with rising temp. Under no conditions does the reaction yield pure  $SF_3$ ; some  $SF_2$  is formed through decomposition of  $SF_3$  by formed by  $2 AgF + S = 2AgS + SF_3$ ; attack of the glass vessel by  $SF_3$  results in the formation of some  $SF_2$ . Complete analysis of the gas obtained at the optimum temp., 140° (about 1.5 hrs.) gave  $SF_3$  80.15,  $SF_2$  11.1,  $SF_4$  4.28,  $SOF_2$  4.18. At the same temp., in a Pt vessel (with glass tubes), the gas was  $SF_3$  88.19,  $SF_2$  3.42,  $SF_4$  3.06,  $SOF_2$  4.08; consequently, the material of the reaction vessel has little influence.  $PbF_3$  and  $ZnF_2$  react with  $S$  at a higher temp. than does  $AgF$  and the resulting gas is decomposed to a higher degree. (2)  $SF_3$  reacts with Na vapor at room temp.; with Al powder, Si, Zn, and  $KClO_3$  no reaction is observed at 100°; with  $KMnO_4$  there is a reaction at 100°; with  $Na_2O_2$ ,  $SF_3$  reacts thermodynamically even at room temp. Hydrolysis by water vapor at room temp. is complete within 30–45 sec.  $\Delta H_f^{\circ}$

A-2-SEA METALLURGICAL LITERATURE CLASSIFICATION

ZORIN, N.I., kand. filosofskikh nauk, dotsent

V.I. Lenin on social determinism. Trudy MIIT no.223:142-  
156 '65.  
(MIRA 18:11)

PHASE I BOOK EXPLOITATION 934

Zubtsov, Mikhail Yefimovich, Candidate of Technical Sciences, Docent, and  
Zorin, Nikolay Konstantinovich, Engineer.

Shtampovka-vyrubka krupnogabaritnykh detalei (Punching Large-sized Parts)  
Moscow, Mashgiz, 1955. 60 p. (Series: Bibliotekha shtampovshchika,  
vyp. 2) 5,000 copies printed.

Ed.: Nedorezov, V.Ye., Candidate of Technical Sciences; Ed. of Publishing  
House: Leykina, T.L.; Tech. Ed.: Pol'skaya, R.G.; Managing Ed. for  
literature on machine-building technology (Leningrad Division, Mashgiz);  
Nikitin, P.S., Engineer; General Ed: Romanovskiy, V.P., Candidate of  
Technical Sciences, Docent.

PURPOSE: This booklet is intended for workers in press-forming shops as an  
aid in improving skills by means of exchange of progressive work experience  
and the introduction of advanced cold-punching methods.

COVERAGE: This booklet is the second in the series Bibliotekha shtampovshchika ~  
(Press Operator's Little Library). It describes the design of dies and the

Card 1/3

Punching Large-sized Parts 934

processes which can be used for blanking and punching large-sized parts in machine-building plants. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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1. Some special features in press forming large-sized parts	3
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Card 2/5

Punching Large-sized Parts 934

9. Engineering and design standards

AVAILABLE: Library of Congress

Card 3/3

56

GO/afm  
12-12-58

ZORIN, N.K.

ZUBTSOV, Mikhail Yefimovich, dots., kand. tekhn. nauk; ZORIN, Nikolay Konstantinovich, inzh.; ROMANOVSKIY, V.P., dots., kand. tekhn. nauk, red.; MEDOREZOV, V.Ye., kand. tekhn. nauk, red.; LEYKINA, T.L., red. izd-va; POL'SKAYA, R.G., tekhn. red.

[Stamping and blanking of large parts] Shtampovka-vyrubka krupnogabarnitykh detalei. Pod obshchey red. V.P. Romanovskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 60 p. (Bibliotekha shtampovshchika, no.2). (MIRA 11:7)  
(Sheet metal work)

VAYNTRAUB, D.A., inzh.; ROMANOVSKIY, V.P., kand.tekhn.nauk, dots., red.;  
MALOV, A.N., kand.tekhn.nauk, retsenzent; ZOHN, N.K., inzh.  
red.; POL'SKAYA, R.G., tekhn.red.

[Improving precision of stamped parts requiring punching and  
bonding] Povyshenie tochnosti shtampuemых деталей при вырубке и  
гибке. Pod obshchey red. V.P.Romanovskogo. Moskva, Gos.nauchno-  
tekhn.izd-vo mashinostroit. lit-ry, 1955. 65 p. (Bibliotekha  
shtampovshchika, no.3)  
(Punching machinery) (MIRA 11:2)

ZORIN, V.M.  
ZORIN, V.M.

Epidemiological significance of different age groups of *A. maculipennis*  
in Vitebsk Province. Med.paraz. i. paraz.bol. supplement to no.1:13  
'57. (MIRA 11:1)

1. Iz byvshay Vitebskoy oblastnoy protivomalyariynoy stantsii.  
(VITEBSK PROVINCE--MOSQUITOES AS CARRIERS OF DISEASE)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6

ZORIN, O.D., KHLEBNIKOV, A.E.

"Decarbonization of Metals in Oxygen-Blown Recirculation Furnaces,"  
lecture given at the Fourth Conference on Steelmaking, A.A. Baikov, Institute of  
Metallurgy, Moscow, July 1-6, 1957

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420015-6"

25(6)

AUTHOR:

Zorin, O. D.

SOV/32-25-3-52/62

TITLE:

An Apparatus for Simultaneously Taking Gas and Metal Samples  
From Steel-melting Furnaces (Pribor dlya otnovremennogo  
otbora prob gaza i metalla iz staleplavil'noy pechi)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 375-376 (USSR)

ABSTRACT:

An apparatus for simultaneously taking samples of metal and of the gas immediately above the slag is described (Fig). The water-cooled holding device consists of two steel tubes ( $D = 20$  mm). A brass tube ( $D = 2$  mm) by means of which the gas sampling is done is contained in one of the water pipes. At the end of both pipes there is a steel cartridge containing the quartz vessel for taking the metal sample. The vessel for the metal sample is a quartz tube of 120 mm length and 15 mm diameter. By the hydrostatic pressure it is filled with the sample. The sampling of the gas is done by means of a vacuum pump. The sampling process lasts for 1-1.5 minutes. A table of oxygen and carbon determinations of samples taken with the apparatus described is given (Table). There is satisfactory agreement between the results. There are 1 figure and 1 table.

Card 1/2

An Apparatus for Simultaneously Taking Gas and Metal Samples From Steel-melting Furnaces

SOV/32-25-3-52/62

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii  
(Central Scientific Research Institute of Ferrous Metallurgy)

Card 2/2

ZORIN, O.D.

Mathematical and statistical balance method of calculating  
open-hearth furnace charges. Met. i gornorud. prom. no.2:  
20-24 Mr-Ap '65. (MIRA 18:5)

ZORIN, O.D.; KUTSENKO, A.D.

Using a correlative analysis for the study of oxygen absorption  
by an open-hearth furnace bath from the furnace atmosphere.

Izv. vys. ucheb. zav.; chern. met. 7 no.7:69-76 '64

(MIRA 17:8)

1. Institut avtomatiki Gosplanu UkrSSR.

ZORIN, O.D.; SOROKIN, A.A.

Investigating the participation of an open-hearth furnace atmosphere in the oxidation of carbon. Izv. vys. ucheb. zav.; chern. met. 7 no.9:43-47 '64. (MIRA 17:6)

1. Institut avtomatiki Gosplanu UkrSSR.

ZORIN, O.D.; CHEVELA, L.A.; DUBINA, Yu.O.

Iron ore consumption in the finishing period and the efficiency  
of its use. Izv. vys. ucheb. zav., chern. met., 7 no.11:53-  
58 '64. (MIRA 17:12)

1. Institut avtomatiki Gosplana UkrSSR.

ZORIN, O.D., Cand Tech Sci -- (diss) "Study of the process of  
decarbonizing steel in a recirculation steel-smelting furnace."  
Mos, 1959. 22 pp (Glavniiiprojekt under Gosplan USSR. Central  
Sci. Res. Inst of Ferrous Metallurgy). 110 copies  
(KL, 39-59, 104)

ZORIN, O.D.

PHASE I BOOK EXPLOITATION

SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th,  
Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii  
(Physicochemical Bases of Steel Making; Transactions of the  
Fifth Conference on the Physicochemical Bases of Steelmaking)  
Moscow, Metallurgizdat, 1961. 612 p. Errata slip inserted.  
3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR, Institut metallurgii imeni  
A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy  
of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveig.  
Tech. Ed.: V. V. Mikhaylova.

Card 1/16

115

Physicochemical Bases of (Cont.)

SOV/54II

**PURPOSE:** This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

**COVERAGE:** The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

Card 2/16

Physicochemical Bases of (Cont.)

SOV/8411

Panov, A. S., and P. N. Perchatkin. Comparison of the Desulfurizing Capacity of Oxides During the Melting Period in Processing Low-Manganese Pig Irons

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25(6), 18(7)

AUTHOR:

Zorin, O. D.

SOV/32-25-4-51/71

TITLE:

Slag Sampling Apparatus (Pribor dlya otbora prob shlaka)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4,  
pp 489 .. 490 (USSR)

ABSTRACT:

An apparatus has been designed by means of which it is possible to study continuously - i.e. over the entire thickness - slag coatings with regard to their composition and structure, and thus to determine the layer composition at the border between the gas and metal phases. The apparatus (Fig) is basically a bowl-shaped steel casting with a bottom that can be closed. The bowl is introduced into the slag while the bottom is open. It closes as soon as the wire which serves to keep the bowl open melts in the slag. Investigations carried out by means of this apparatus showed, for instance, in the case of a 400-ton Martin furnace that the slag coating is composed of several layers. Immediately above the metal (up to 40 .. 45 mm high) the slag is black and contains metallic reguli of the metal (diameter ~ 2-5 mm).

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Slag Sampling Apparatus

SOV/32-25-4-57/71

In the following layers (50-90 mm) the slag is dark grey, less porous, and contains fewer and smaller metallic reguli (diameter = up to 1 mm). The zone of 80-120 mm is in contact with the gas phase. It is light grey, its structure is dense and finely crystalline, and it breaks like stone. For petrographical investigations it is possible to obtain, by means of the apparatus described, both quenched samples and samples which are cooled slowly by using brass or fireproof clay bowls. There is 1 figure.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernykh metallov (Central Scientific Research Institute of Ferrous Metals)

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S/148/60/000/006/013/016/XX  
A151/A030

AUTHOR: Zorin, O.D.

TITLE: Regularities in Decarbonization Utilized for the Automatic Control  
of a Steel Furnace

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1960,  
No. 6, pp. 54 - 58

TEXT: The Central Scientific Research Institute of Iron Metallurgy has studied 680 heats in 385-ton basic open-hearth furnaces and in a recirculation-type 10-ton basic oxygen furnace, with and without the addition of oxygen, compressed air and high-pressure steam. The process of decarbonization was watched by measuring the carbon content before and after the fusion of metal, and in the course of fusion. A variety of curves was observed, and three basic types of curve were stated: straight-line (Fig. 1) - constant decarbonization rate; concave (Fig. 2) - continually dropping rate; convex (Fig. 3b, c). The process may correspond to one of the types, or to a combination of these (Fig. 4). The first curve can be expressed by the equation  $[\% C]_T = [\% C]_H - \alpha t$ , (1) where  $[\% C]$  - carbon concentration in metal at the check moment,  $\%$ ;  $\alpha$  .. the decarbonization

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S/143/60/000/006/013/015/XX  
A161/A030

Regularities in Decarbonization Utilized for the Automatic Control of a Steel Furnace

rate factor;  $\tau$  - heat time at the carbon check moment, min;  $[% C]_H$  - carbon concentration at the start of the check (e.g., at the moment of fusion, %). The equation of the second type curve is:  $[% C] = \alpha(\tau - \tau_K)^2 + [% C]_K$ , (2) where  $\tau_K$  - heat time at the end of the check (e.g., before deoxidation), min;  $[% C]_K$  - carbon concentration in metal at the end of the check. The third curve type can also be expressed with a corresponding curve. The Equations (1) and (2) describe the typical process, and they may be used for the development of automatic furnace control in the fusion and finishing periods. It is only necessary to know the C concentration at the start of check to use the Equation (1); the C content can be determined by conventional means. The time  $\tau$  is arbitrary, and the  $\alpha$  factor must be found empirically in a special study for the furnace and certain process conditions. The C content can be calculated with sufficient accuracy in advance for any moment during the heat. In the Equation (2) it is necessary to know the  $\alpha$  value, the  $\tau_K$  time, the  $[% C]_K$  at the end of check, and the time  $\tau$ . All values except  $\alpha$  are arbitrary and must be predetermined. No new methods of metal analysis are needed. A statistical study of one or several furnaces will be necessary preliminarily to the investigation of the decarbonization process.

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A161/A030

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for developing the automatic control system. The computer centers (MSS) at the plants will have to process the statistical data, and a special computation method will have to be developed to reflect accurately the entire heat process with all its specific peculiarities. An 80-column perforation set would be the most suitable. Conclusions: 1) The great variety of decarbonization curves may be presented in three basic curve types and their combinations. 2) A study of the technological heat conditions ought to start with a definition of heats by the basic curve types. This will enable a classification of the process parameters and means for obtaining the wanted decarbonization curve. 3) The equations of decarbonization curves may be used for the development of automatic furnace control during the fusion and finishing. There are 4 figures.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii  
(Central Scientific Research Institute of Iron Metallurgy)

SUBMITTED: November 30, 1959

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A161/A030

Regularities in Decarbonization Utilized for the Automatic  
Control of a Steel Furnace

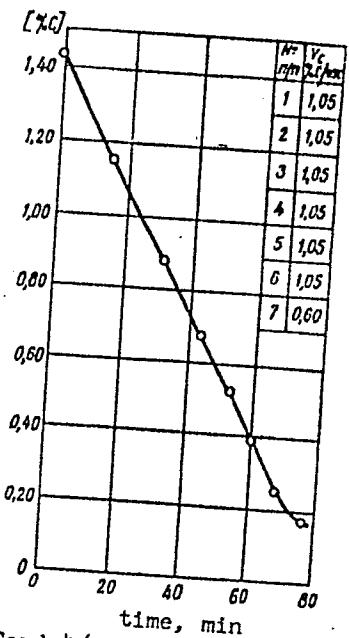


Figure 1

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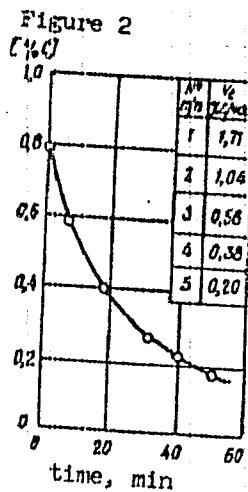
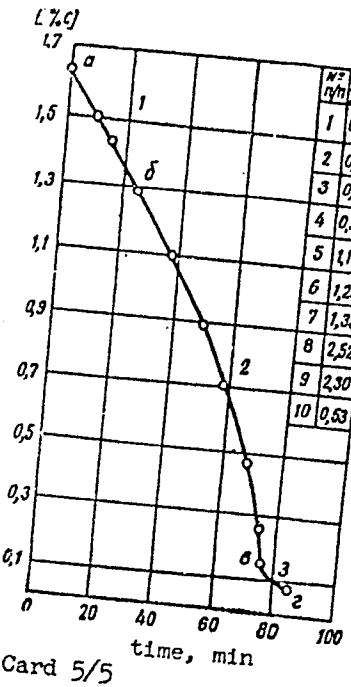


Figure 2



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A161/A030  
Regularities in Decarbonization Utilized for the Auto-  
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